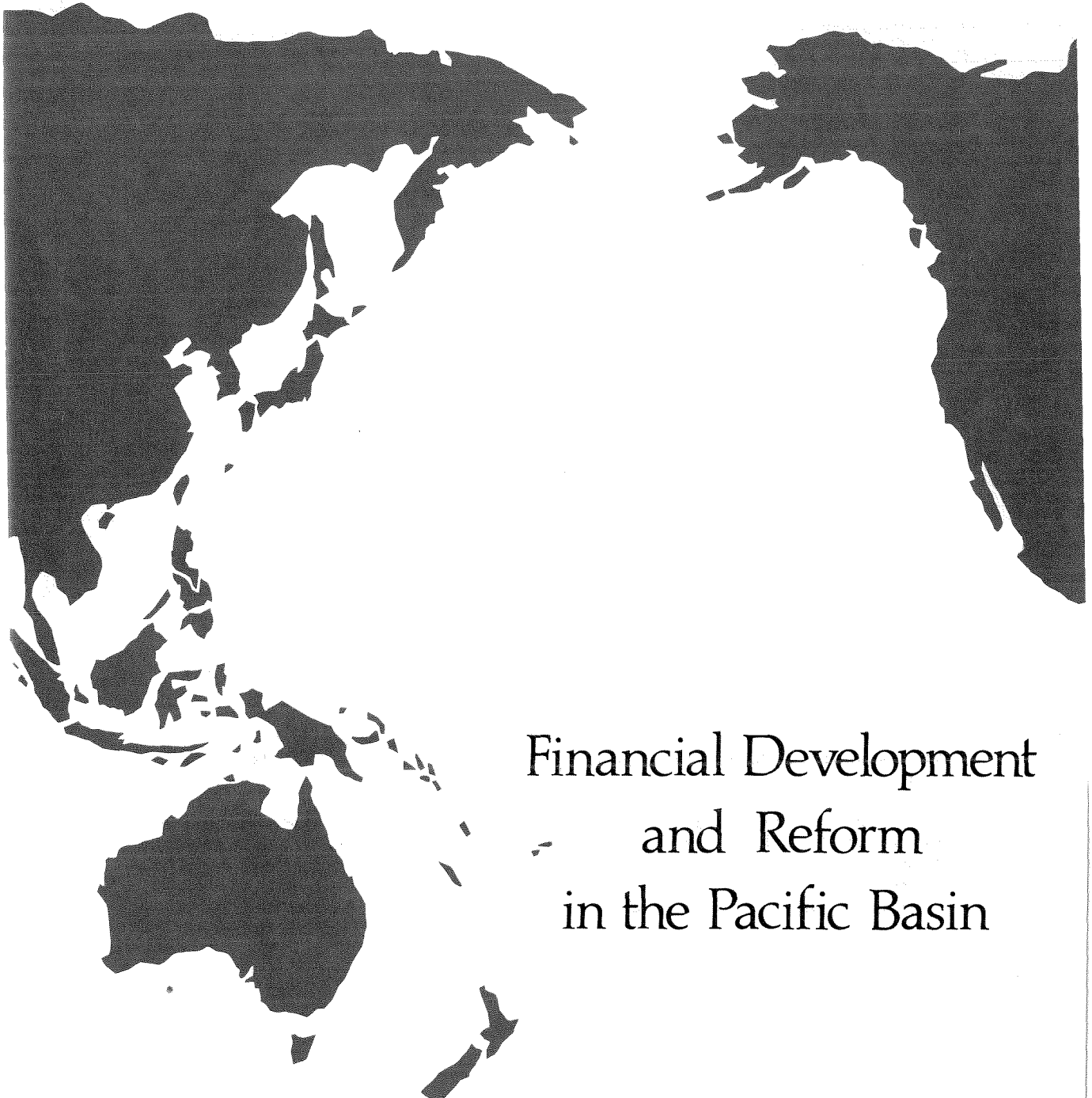


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# The Asian Dollar Market

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by Kenneth Bernauer\*

The Asian dollar market has grown at a very rapid pace since its inception in 1968. From a small base of \$30.5 million, the market's size in its major center—Singapore—reached \$85 billion at the end of 1981. Nearly as dramatic has been the transformation of the market's structure and functions. At the beginning it was almost exclusively an inter-bank market that served as an adjunct to the Euro-dollar market. But given the impetus of the 1973–1974 oil price “shocks,” it has become a mature banking center serving the rapidly growing economies of East Asia. As with the Euro-dollar market, the growth of the Asian dollar market has also generated considerable controversy, both as to the

reasons for its growth and the resultant impacts on the areas, primarily Singapore and Hong Kong, that host it.

The purpose of this paper is to review briefly the developments in the Asian dollar market and to analyze the costs and benefits of this “offshore” financial facility on the centers in which it is located. Section I describes the nature of the market and considers the factors that led to its creation and shaped its development. Section II describes how the functions and structure of the market have evolved over time, while Section III analyzes how the market has affected its primary center, Singapore.

## I. Origin of the Asian Dollar Market (ADM)

The Asian dollar market consists of a group of banks in Singapore and Hong Kong that accept deposits and make loans in U.S. dollars (and certain other foreign currencies).<sup>1</sup> Their deposits are time, rather than checking accounts. Those institutions in Singapore authorized to accept ADM deposits are known as “Asian Currency Units” or ACUs. As with its counterpart—the Euro-dollar market centered in London, the ADM is “offshore” in the sense that its financial instruments are denominated in a currency different from that issued by the host country. Indeed, by purely financial criterion, the market centered in Singapore is indistinguishable from that in London. The only unique characteristic of the two centers is their geographic location.

### Why Offshore?

Since the Asian dollar market is an offshore market, its origins and development need to be considered in the context of the development of such markets. Offshore markets for dollars (and

several other currencies) have developed for three basic reasons. First, the prominent role of the U.S. dollar in international trade and finance has given rise to a very substantial foreign demand for dollars, both for transactions and investment purposes. Foreign corporations, as well as U.S. corporations operating abroad, use dollar instruments frequently in their activities. Foreign governments, too, hold a substantial portion of their international reserves in dollars. For all of these entities, an offshore dollar market reduces the transactions costs of converting other currency into dollars.

Second, the U.S. regulatory environment has given offshore dollar facilities certain advantages over those in the domestic U.S. market. Reserve requirements and ceilings on deposit interest rates applied to banks here in the U.S. are generally not applied in the offshore centers. The lack of such regulation has allowed them to offer more attractive terms on deposits and loans than domestic U.S. banks can offer.

Third, offshore centers generally also have “locational” and “skill” advantages similar to

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those accounting for the existence of regional banking centers in the U.S. For example, thanks to its historical role as a world banking center, London has developed a skilled labor force and body of expertise in providing banking services. (For a discussion of London's prominence in the Euro-dollar market, see the boxed narrative of the development of the Euro-dollar market.) Moreover, proximity to the ultimate users can be a considerable advantage to an offshore center. For example, since London banks are in the same (or similar) time zone as their European customers, they are often able to consummate transactions more quickly than their New York competitors. Close proximity can also make communications and the gathering of information on conditions affecting the credit-worthiness of borrowers easier. These reasons help explain why offshore centers are likely to persist even as the U.S. eases its regulations on domestic banks.

### **Why an Asian Offshore Center?**

The Asian dollar market illustrates that the creation of an offshore facility requires a favorable regulatory climate as well as a demand for its services. A need for the facilities of an Asian offshore dollar center existed well before its inception in 1968. Developed and developing countries of the region had long used the dollar extensively in trade and investment activities. However, prior to 1968 they used the facilities of the major Western dollar centers, primarily New York and London.

One advantage of an offshore market in the Far East over that already in Europe involves the time-zone difference between London and East Asian capitals. Due to this considerable time-differential, Far Eastern bankers generally could not consummate transactions with London banks within a single day because the London market was closed during most or all of the normal working day in East Asia. To bridge this gap, the region needed an offshore center in the Far East that would be open when the London market opened. In this respect, Singapore had the advantage over Hong Kong and Tokyo—3:30 p.m. there corresponds to 9:00 a.m. in London.

Still, an Asian offshore market was not feasible until regulations were altered to allow banks there to compete on equal terms with their London counterparts. The impetus for these changes came in the

mid-1960s from Bank of America. The U.S. presence in Viet Nam had increased the use of dollars in the region and led Bank of America to expect the Asian-Pacific area to become a prime source for dollar funds. The bank set out to attract them. Its plan was to establish facilities in Asia to offer smaller investors deposits at competitive market rates and minimums of only \$25,000 instead of the \$100,000 required in London.

To realize this objective, the Bank of America had to sell this concept to a government in Southeast Asia that would be willing to provide the necessary tax incentives. With its lack of a natural resource base, Singapore was highly receptive to the idea and was willing to provide the needed fiscal enticements in hopes that the income generated from the financial services sector would bolster the country's balance of payments and also help to diversify the country's economy.

To put the Asian dollar market on equal footing with the Eurocurrency market, the government of Singapore in October 1968 exempted from withholding tax the interest paid to non-residents placing deposits with banks in Singapore licensed to deal in foreign currencies. Before this change, the withholding tax payable on deposit interest for non-resident deposits in foreign currencies was 40 percent. A string of additional tax concessions to foreign banks to promote the offshore market followed. For example, in January 1973, the tax on bank profits from Asian dollar offshore loans was cut from 40 percent to 10 percent, while the tax on the profits of Asian dollar loans to local residents remained at 40 percent. (One should note, however, that ACU's lending to local residents are generally restricted by the Monetary Authority of Singapore, to a total of 30 million Singapore dollars (about 1.4 million U.S. dollars per lending institution.) Moreover, several estate and stamp duties were either waived or rescinded. Chief among these was the removal in March 1972 of the 10-percent stamp duty on the face value of bills of exchange, certificates of deposit and promissory notes. Furthermore, in June 1973, stamp duties on offshore loan agreements were waived. Three years later, non-resident holdings of foreign currency deposits were made exempt from estate duties.

Complementing the multitude of tax conces-

## Development of the Euro-dollar Market

The sterling crisis of 1957 precipitated the formation of the Euro-dollar market. The Suez crisis and worsening inflation in Britain put intense downward pressure on the pound sterling and prompted the British government to impose capital controls. The government placed controls on nonresident sterling borrowing and lending by British banks and put restraints on sterling credits granted to countries engaging in third-party transactions. These moves caused a shift away from financing third-party trade with sterling credits and deposits toward the use of dollar financing.

The reduced importance of the pound in comparison to the dollar should have prompted a shift in business from London to New York except that Communist countries preferred to place their dollar deposits in western Europe; they feared that the United States would confiscate those deposits if put in the U.S. Moreover, U.S. regulatory policy indirectly encouraged the development of an Euro-dollar market. Policies such as the U.S. Interest Equalization Tax imposed a substantial levy on the sale of foreign bonds and equities in the U.S. and restrictions on American outward direct investment that virtually forced U.S. companies wishing to expand abroad to have access to Euro-dollar financing.

Furthermore, since 1933, the U.S. government has imposed ceilings on interest rates commercial banks and other depository institutions can pay on their checking and time deposits. These ceilings, specified in the Federal Reserve's Regulation Q, have been maintained in large part to ensure a low-cost source of funds to the main supplier of home mortgages—savings and loan institutions. The Regulation Q ceilings were not applied to deposits booked at U.S. banks' overseas branches, which were also free from reserve requirements. The exceptions allowed U.S. bank branches located abroad to compete with foreign banks not subject to such regulations. Bank branches abroad could offer their corporate customers a competitive rate on time deposits and actually recoup some of the funds lost on domestic deposits. The freedom from reserve requirements and interest rate restrictions, therefore, gave Euro-markets a competitive edge.

While the avoidance of reserve requirements and usury ceilings can explain the growth of the Euro-dollar market, it does not explain how London became the center of that market. According to many observers,\* the competitive edge enjoyed by London stems in large part from its substantial head-start in acquiring the skills for conducting international transactions and its proximity to the European market. These accidents of history and geography were matched by deliberate actions of the British government to grant a substantial latitude to banks operating in London to accept deposits and to make loans in foreign currencies.

\*See, for example, McKinnon, 1977.

sions, the government of Singapore liberalized a number of regulations affecting foreign banks to improve their competitive position against their counterparts in the Eurocurrency market. In January 1972, the monetary authorities in Singapore abolished the 20 percent liquidity ratio that licensed banks operating in the Asian dollar market were required to hold against deposits. In June 1978, exchange controls were completely lifted. Resi-

dents were permitted to borrow and lend in all currencies and to deal in foreign exchange. The terms and conditions governing offshore banks were subsequently revised to grant them greater freedom in dealing with residents. These last measures were aimed at putting Singapore on a more competitive footing with its major rival in the region, Hong Kong.

## II. Growth and Evolution of the Market

As mentioned, the Asian dollar market has grown quickly since its inception in 1968 (see Tables 1-3). From a small capital base of \$30.5 million, the market in Singapore alone, which now accounts for the bulk of activity, had grown to over \$85 billion by the end of 1981. The estimates of the Asian dollar market activity in Hong Kong given in Table 3 suggest that the overall size of the market in the two centers was about \$134.2 billion in 1981, with the Singapore portion about 75 percent greater than that in Hong Kong. These figures, however, overstate the total size as the data include interbank transactions that involve some double-counting of actual market transactions. Earlier estimates suggest that the aggregate figures may overstate the actual size of the total market by one-quarter to one-third.

In any case, the market has grown extremely rapidly. Most growth concentrated in the early years as demonstrated by the Singapore market which more than doubled in size in each year through 1973. But although growth subsequently tapered off, it remains impressive. The increase in the Asian market's share of total offshore dollar transactions has been dramatic. Singapore's share of the European and Asian markets combined increased from .35 percent in 1970 to 4.77 percent by the end of 1981 (Table 4). If Hong Kong's share were also to be counted, the ADM's overall market share would have been 7.4 percent.

The sharp increase in Singapore's share of offshore dollar activity can be traced in large measure to the substantial growth in the number of banks

**Table 1**  
**Asian Dollar Market in Singapore**

End of Period	Number of ACU's+	Total Assets/Liabilities U.S. dollars (millions)	Annual growth rate (percent)
1968	1	30.5	—
1969	11	123.0	303.3
1970	16	389.8	216.9
1971	21	1,062.8	172.7
1972	24	2,976.1	180.0
1973	46	6,277.1	110.9
1974	56	10,357.5	65.0
1975	66	12,597.4	21.6
1976	69	17,354.1	37.8
1977	78	21,018.3	21.1
1978	85	27,040.1	28.1
1979	101	38,162.7	41.1
1980	108*	54,392.6	42.5
1981	—	85,852.0	57.8

\* end of March 1980

+ Asian Currency Unit (ACU) is a separate accounting unit of banks and other financial institutions given approval to transact in the Asian dollar market.

engaging in the offshore business operating in the country. From Bank of America's initial entry in 1968, the number of financial institutions taking Asian dollar accounts in Singapore increased to 120 by the end of 1982. Seventy-four of these institutions are banks, 26 of which are locally incorporated while 48 are foreign banks. Among the foreign banks, U.S. banks are in the lead with 25 facilities, followed by Europe with 22.

The scope of Asian dollar operations in Hong Kong has shown a somewhat lower rate of increase. This may reflect the fact that foreign banks were already well established in Hong Kong when the

Asian dollar market began. For example, the number of foreign banks increased from 52 to 115 in Hong Kong from the end of 1969 to February 1980, an increase of 112 percent. Over the same interval, the number of foreign banks in Singapore rose from 7 to 48, or nearly sevenfold.

### Functions of the Market

Two types of transactions are basic to both offshore and onshore banking centers. The first is financial intermediation, in which banks borrow, that is, take deposits, from non-bank entities with surplus funds and re-lend them to those with finan-

**Table 2**  
**Volume of Funds Lent in Hong Kong and Singapore Markets**  
**(billions of U.S. dollars)**

(year-end)	Hong Kong			Singapore
	Bank Loans Abroad, etc. (A)	DTC's* Loans Abroad, etc. (B)	Total (A) + (B)	Total funds lent to Non-banks by Singapore ACUs
1973	0.70	N.A.	N.A.	1.21
1974	1.50	N.A.	N.A.	2.70
1975	2.45	N.A.	N.A.	3.47
1976	3.60	N.A.	N.A.	4.39
1977	4.41	N.A.	N.A.	5.28
1978	3.48	4.95	8.43	6.38
1979	5.89	5.59	11.48	8.48
1980	7.58	7.11	14.69	12.40
1981	10.81	9.79	20.60	19.45

\*DTC - Deposit Taking Companies

**Table 3**  
**Volume of Funds Raised in Hong Kong and Singapore Markets+**  
**(billions of U.S. dollars)**

Year-end	Hong Kong			Singapore
	Bank deposits from overseas banks (A)	DTC's* deposits from overseas banks (B)	Total (A) + (B)	Total Amount of Liability on ACU accounts
1973	1.75	N.A.	1.75	6.28
1974	3.14	1.20	4.34	10.36
1975	4.21	N.A.	4.21	12.60
1976	5.90	N.A.	5.90	17.35
1977	7.98	3.55	11.53	21.02
1978	10.68	5.70	16.38	27.04
1979	14.68	6.28	21.14	38.16
1980	22.97	9.72	32.69	54.39
1981	29.92	18.42	48.34	85.85

+Includes interbank transactions between Hong Kong and Singapore.

\*DTC - Deposit Taking Companies

cial deficits. In performing this function, banks engage in "maturity transformation," that is, they offer liabilities that are shorter-term and more liquid than those of their assets. The second is *interbank* borrowing and lending. Unlike transactions with non-banks, the maturities of interbank borrowing and lending tend to be closely matched because the interbank lending of one bank at a given maturity is the interbank borrowing of some other bank at that maturity. Both types of transactions are prominent in mature banking markets, but in offshore markets such as the Eurocurrency markets, wholesale interbank activities tend to dominate.

In its earlier years, the Asian dollar market served primarily as a conduit of funds from the Asian region to Europe and North America. The main reason behind this transfer of funds lay in the higher interest rates and greater investment opportunities existing outside Southeast Asia at the time.<sup>2</sup> This pattern is evident in the differing bank/non-bank shares of liabilities and assets in the markets, as well as in the distribution of the maturities of assets and liabilities. As Table 5 indicates, deposits of non-banks (with Singapore ACU's) were slightly greater than 62 percent of all liabilities in 1970, while loans to non-banks were less than 4 percent of total assets.

Not surprisingly, given that their main borrowers were other banks, offshore banks in the Asian dollar market carefully matched the maturities of their claims and liabilities prior to 1974 (See Table 6).

As the market matured, however, this pattern changed dramatically. The oil price increases of 1974 caused a large-scale "recycling" of OPEC funds, formerly placed in Europe and North America, back to developing countries. The intervening years have seen funds flowing from Europe and the U.S. to Asia via the Asian dollar market. In its 1980 Annual Report, the Monetary Authority of Singapore (MAS) said that "76 percent of ACU funds were taken up in Asia in early 1979." This shift has led to an equally dramatic change in the composition and maturity structure of assets and liabilities in the market. By 1981, the non-bank share of total deposits had fallen to 15.9 percent from 62.5 percent in 1970, while loans to non-bank customers had risen from 3.6 percent of assets in 1970 to 22.7 percent in 1981. Reflecting this shift toward financial intermediation, the maturity of the market's assets has lengthened significantly in comparison to that of its liabilities since 1974.

The Asian dollar market now has a structure closely resembling that of the London Eurocurrency

**Table 4**  
**Comparison of Gross Size of Offshore Dollar**  
**Market and Assets/Liabilities,**  
**Singapore Asian Dollar Market**  
**1970-1981**

<b>Year</b>	<b>Gross Offshore Dollar Market Size* (Billion U.S. \$)</b>	<b>ACU Liabilities (Billion U.S. \$)</b>	<b>ACU as Percent of Offshore Market</b>
1970	110	0.390	0.35
1971	150	1.063	0.70
1972	210	2.976	1.42
1973	315	6.277	1.99
1974	395	10.357	2.62
1975	485	12.597	2.60
1976	595	17.354	2.92
1977	740	21.018	2.84
1978	950	27.040	2.85
1979	1220	38.163	3.13
1980	1655	54.393	3.28
1981	1800	85.852	4.77

\*Source: Morgan Guaranty Trust—based on foreign currency liabilities of banks in major European countries, the Bahamas, Bahrain, Cayman Islands, Panama, Canada, Japan, Hong Kong and Singapore.



market and, in broader terms, a mature offshore market. Interbank transactions dominate in both Singapore and London to virtually the same degree. At the end of 1981, interbank deposits as a proportion of total foreign currency deposits stood at 77 percent in Singapore and 76 percent in London. Not only is the share in interbank deposits the same, but the maturity structure of assets and liabilities are also virtually identical, as can be seen from Table 7. The table also shows that the maturity structure of foreign currency assets and liabilities of banks operating in Singapore and London is highly skewed to the short-end of the market, as is typical of banking markets. For both assets and liabilities, the greatest number of maturities falls in the category of "less

than one month," followed by "one month to three months," and then by "three months to twelve months." Reflecting their financial intermediation activities, the asset side of the banks' balance sheet is less skewed to the short end of the market than the liabilities side. For example, assets with maturities exceeding one year comprise 24 percent of total assets in London and 17 percent of total assets in Singapore. This compares with 4 to 5 percent of total liabilities in both centers.

One could gain greater insights into the types of transactions that are conducted in the Asian dollar market by dividing assets and liabilities into their bank and non-bank parts. The Singapore authorities provide no such breakdown at different maturities,

**Table 5**  
**Asian Dollar Market in Singapore:**  
**Distribution of Sources and Uses of Funds**  
**(Percent)**

Item	1970	1975	1976	1977	1981
Total Assets	100.0	100.0	100.0	100.0	100.0
Loan to non-bank customers	3.6	26.2	23.3	22.8	22.7
Interbank funds	95.0	72.2	74.6	74.9	72.5
Other assets	1.4	1.6	2.1	2.3	4.8
Total Liabilities	100.0	100.0	100.0	100.0	100.0
Deposits of non-bank customers	62.5	16.4	11.3	10.7	15.9
Interbank funds	36.2	81.7	86.8	87.3	77.4
Other liabilities	1.3	1.9	1.9	2.0	6.7

**Table 6**  
**Composition of Outstanding Amount of Funds Raised and**  
**Employed on the ACU Accounts, by Maturity (percent)**

Year-end	Fund raising					Fund employment				
	1 month or less	Over 1 month but 3 months or less	Over 3 months but 1 year or less	Over 1 year but 3 years or less	Over 3 years or less	1 month or less	Over 1 month but 3 months or less	Over 3 months but 1 year or less	Over 1 year but 3 years or less	Over 3 years or less
1973	23.5	24.7	48.2	3.6	20.6	24.5	50.1	4.8		
1974	27.3	26.5	44.1	2.1	19.4	28.1	44.8	7.7		
1975	24.8	31.8	41.1	2.3	16.0	29.8	39.3	14.9		
1976	49.2	27.9	19.4	1.6	1.9	35.1	27.3	20.9	3.2	13.5
1977	51.0	29.3	17.4	0.9	1.4	35.7	27.6	20.8	4.8	11.1
1978	45.9	30.2	20.8	2.1	1.0	34.4	28.2	20.5	4.9	12.0
1979	48.2	29.0	19.0	3.0	1.0	35.0	26.0	20.0	6.0	13.0
1980	44.4	30.0	20.5	3.0	2.0	32.0	27.0	22.0	5.0	14.0
1981	46.5	30.0	20.0	2.0	1.0	35.0	27.0	21.0	4.0	13.0

Source: Monthly Authority of Singapore, Quarterly Bulletin

but the London authorities do. Performing this exercise for London banks, given their strong similarities with the Singapore market, may therefore prove useful. Such a breakdown is provided in Table 8.

For the non-banking sector, an extensive maturity transformation is evident with the average term to maturity of loans to nonbanks (claims) far exceeding that of deposits (liabilities). For example, about 58 percent of total credits are for a maturity of one year or more, while 44 percent are for a maturity of three years or more. By contrast, the liabilities of the non-banking sector are concentrated in the

short-end of the market. Maturities of three months or less constitute about 70 percent of the liabilities to non-banks.

In contrast, the assets and liabilities of interbank transactions are almost perfectly matched at each and every maturity. The very limited amount of maturity transformation undertaken in trading among Eurocurrency banks reflects the use of that market vehicle for arbitrage and hedging activity. As a hypothetical example of the latter activity, consider an Austrian firm that uses a local bank to cover its exchange rate risk in deutschemarks. The

**Table 7**  
**Maturity Analysis of Liabilities**  
**and Claims in Foreign Currencies (percent)**  
**(December 1981)**

Maturities	Claims	
	London	Singapore
1 month	31.2	35.0
1 month to 3 months	23.0	27.0
Over 3 months to 12 months	21.8	21.0
Over 1 year to 3 years	7.4	4.0
3 years and over	16.6	13.0

Maturities	Liabilities	
	London	Singapore
1 month	42.9	46.5
1 month to 3 months	28.9	30.0
Over 3 months to 12 months	24.5	20.0
Over 1 year to 3 years	2.3	2.0
3 years and over	1.6	1.0

**Table 8**  
**Maturity Analysis of Liabilities**  
**and Claims in Foreign Currencies, Banks and**  
**Certain Other Institutions in the United Kingdom**  
**November 18, 1981**

Maturities	Total (U.S. \$ millions)		Banks		Nonbanks	
	Credits	Liabilities	Credits	Liabilities	Credits	Liabilities
1 month	31.1%	42.9%	26.7%	31.2%	4.4%	11.7%
	120,218	144,780	1,030	105,344	17,128	39,436
1 month to 3 months	23.0%	28.9%	20.1%	22.3%	2.9%	6.6%
	89,009	97,555	77,734	75,313	11,275	22,242
Over 3 months to 12 months	21.8%	24.5%	17.7%	19.8%	4.1%	4.7%
	84,574	82,685	68,580	66,817	15,994	15,868
Over 1 to 3 years	7.4%	2.3%	3.6%	1.8%	3.8%	0.5%
	28,618	7,751	14,083	6,144	14,535	1,607
3 years and over	16.6%	1.6%	4.7%	1.0%	11.9%	0.6%
	64,070	5,360	18,206	3,446	45,864	1,914

**Singapore Asian Currency Units  
Assets & Liabilities\***  
(In U.S. \$ million)

**ASSETS**

End of Period	Interbank Loans				
	Loans to non-banks	Total	In Singapore	Outside Singapore	Other Assets
1968	1.4	29.0	NA	NA	0.1
1969	0.9	120.5	NA	NA	1.6
1970	13.9	370.2	13.1	357.1	5.7
1971	188.8	850.8	38.5	812.3	23.2
1972	600.9	2,331.1	99.4	2,231.7	44.1
1973	1,214.3	4,961.9	261.5	4,700.3	101.0
1974	2,629.4	7,528.0	223.0	7,305.0	199.9
1975	3,303.4	9,098.5	270.1	8,828.4	195.5
1976	4,048.3	12,951.4	414.4	12,537.0	354.4
1977	5,281.2	15,252.5	573.4	14,679.1	484.6
1978	6,376.8	19,829.7	866.6	18,963.1	833.6
1979	8,484.0	28,093.7	1,100.4	26,993.3	1,585.0
1980	12,402.3	39,552.3	1,084.7	38,467.5	2,438.0
1981	19,452.2	62,249.9	1,495.2	60,754.7	4,149.9

**LIABILITIES**

End of Period	Interbank Funds					
	Total Assets/ Liabilities	Deposits of non-banks	Total	In Singapore	Outside Singapore	Other Liabilities
1968	30.5	17.8	12.6	NA	NA	0.1
1969	123.0	97.9	23.7	NA	NA	1.4
1970	389.8	243.7	141.0	5.7	135.3	5.1
1971	1,062.8	237.9	811.2	56.4	754.8	13.7
1972	2,976.1	398.7	2,550.1	145.0	2,405.1	27.3
1973	6,277.2	912.8	5,249.3	405.6	4,843.7	115.1
1974	10,357.5	1,614.2	8,531.4	675.6	7,855.8	211.7
1975	12,597.4	2,067.7	10,294.3	584.0	9,710.3	235.4
1976	17,354.1	1,960.3	15,067.2	799.2	14,268.0	326.6
1977	21,018.3	2,254.6	18,350.3	1,382.8	16,967.5	413.4
1978	27,040.1	3,600.0	21,987.2	1,442.5	20,544.7	1,452.9
1979	38,162.7	5,771.4	29,424.9	1,881.8	27,543.1	2,966.4
1980	54,392.6	9,322.2	40,879.6	1,304.3	39,575.3	4,190.8
1981	85,852.0	13,658.9	66,443.2	1,817.6	64,625.6	5,749.9

\*Includes Inter-ACU transactions.

Source: The Monetary Authority of Singapore.

local bank switches into DM from schillings and places proceeds in a Euromark deposit in London. The price that the firm pays to acquire the DM in the future is approximately equal to the interest rate spread between the two currencies. Since the flow of international trade is in both directions, the use of the forward exchange market for hedging activities should not make the deposit side more liquid than the asset side.<sup>3</sup> Another major activity in the interbank market and the forward market is interest arbitrage. To exploit all excess profit opportunities, banks will undertake covered interest arbitrage until interest rate differentials are aligned with forward premia or discounts. These types of transactions best characterize the London Eurocurrency market and other offshore market centers.

A further reflection of the Asian dollar market's status as an offshore market distinct from the Euro-markets is that its interbank funds come from any location where there are surplus funds and not only from Asian countries. As noted above, one prominent source for funding has been through the London Eurocurrency market. More recently, banks in the Middle East have become highly visible depositors in the Asian dollar market. In fact, many Arab banks are seeking licenses to operate in the Asian dollar sector.<sup>4</sup>

Non-bank sources of deposits come mainly from multinational corporations with surplus funds to invest, central banks and other government agencies responsible for handling foreign exchange reserves, affluent individuals and local business firms involved in international and regional trade. Most nonbank borrowers of funds have until recently

been manufacturers. In 1971, for example, over 50 percent of ACU's loans were to the manufacturing sector. Since then, the share of loans to the manufacturing sector has consistently declined to about 28 percent of the total in 1978.

According to the Monetary Authority of Singapore (MAS), non-bank financial institutions and the manufacturing sector absorbed more than 56 percent of total non-bank loans in 1979. Among the industries involved were the chemical and chemical products sectors which include petroleum refining, metals, textiles and clothing. The share of loans for financing trade and general commerce was also significant. In addition, some loans were used to finance the balance of payments needs of countries adversely affected by the higher oil prices during the year.

### Hong Kong versus Singapore

The growth and development of the Asian dollar market has brought a significant differentiation in the functions carried out by its two major centers, Singapore and Hong Kong. Indeed, the two centers tend to complement one another. Hong Kong serves as the major center for syndicated loans in the Far East (Table 9), while Singapore dominates the funding side of the market (Table 3). Put simply, Singapore gathers deposits from various outside sources while Hong Kong deploys them. Reflecting this division, the liabilities of Hong Kong participants to their Singapore counterparts (\$42.6 billion at the end of 1981) greatly exceed their claims (\$28.4 billion at the end of 1981).

The differentiation between the two centers is

**Table 9**  
**Number of Syndicated Loans to Asian Countries, Arranged by Financial Institutions in Hong Kong, Singapore and other Markets**

Year	Hong Kong	Singapore	Total (including others)
1974	7	1	43
1975	18	0	51
1976	24	4	60
1977	28	5	60
1978	36	15	61
1979	53	10	106
1980 (January/February)	11	1	21

Source: Bank of Japan—Development of International Financial Markets in Hong Kong and Singapore.

partly the result of their regulatory environments. In particular, Singapore does not tax the interest earned by non-residents on their deposits with its Asian dollar market participants, while Hong Kong, until recently, applied a 15-percent tax to such earnings. Singapore's tax policy encouraged its dominance in gathering deposits. However, since February 1982, when Hong Kong abolished its tax on non-resident interest earnings, its ADM deposit liabilities have grown by more than 50 percent.

One of Hong Kong's main advantages in loan syndication is its proximity to the major loan customers in the Asian market. Its other advantages include superior legal resources for loan syndication endeavors and a relatively relaxed bank-regulatory climate that includes reporting requirements much less detailed and extensive than those imposed by the MAS on its bankers.<sup>5</sup>

Over the past three to four years, the largest borrowers in Asia have come overwhelmingly from

its northern portion. In fact, South Korea, Taiwan, and the Philippines (plus Hong Kong itself) dominate the Asian loan syndication market. These three countries received nearly \$14.7 billion in syndicated credits from the offshore dollar markets in the period from 1979-1981, nearly three-quarters of the total provided to the Asian-Pacific region as a whole (Table 10). Hong Kong's proximity to these countries is apt to make it easier for its banks to gather the necessary information and to conduct the negotiations and other transactions such loans entail than their Singapore competitors.

On the other hand, Singapore is geographically closer to Indonesia and Malaysia (which together received a total of \$5.0 billion in credits from 1979 to 1981), countries which, given their favorable growth outlook, show great potential as future markets for syndicated loans. Hence, Singapore's share of this market could increase in coming years.

**Table 10**  
**Current Account Balances of and**  
**Eurocurrency Credits to Selected Developing**  
**Countries in the Asia-Pacific Region, 1975-81**  
**(U.S. \$ millions)**

Country	1975	1979	1980	1981
<b>South Korea</b>				
Current Account	-2,000	-4,590	-5,770	-4,993
Eurocurrency Credits	347	3,258	1,917	2,824
<b>Malaysia</b>				
Current Account	-160	1,052	-253	-2,763
Eurocurrency Credits	425	1,168	—	1,725
<b>Philippines</b>				
Current Account	-99	-1,918	-2,479	-2,774
Eurocurrency Credits	363	2,067	1,056	1,257
<b>Taiwan</b>				
Current Account	-500	+241	-965	+497
Eurocurrency Credits	135	1,063	314	928
<b>Thailand</b>				
Current Account	-500	-2,146	-2,287	-2,686
Eurocurrency Credits	5	200	824.6	660
<b>Indonesia</b>				
Current Account	-1,109	+980	+2,850	-1,168
Eurocurrency Credits	1,607.5	670.4	1,079.5	442.5
<b>Hong Kong</b>				
Current Account	+1,840	-526	-2,233	-2,565
Eurocurrency Credits	543.4	788.7	597.4	71.4
<b>Singapore</b>				
Current Account	-75	-1,002	-1,592	-1,751
Eurocurrency Credits	45	149.3	50	70

### III. Benefits and Costs

To a potential host, an offshore financial center offers some obvious benefits, but it carries some possible drawbacks as well. The benefits include increased employment, job-training leading to an upgrading of labor-force skills, and increased tax revenue, as well as higher export earnings from financial services provided to foreigners. The drawbacks arise from the need of a successful offshore center to be exempt from many regulations applied to domestic financial institutions. This exemption may weaken regulatory constraints on the domestic financial system by making it difficult to prevent offshore facilities from being used to finance domestic activities. There is, therefore, a danger that such facilities could interfere with the conduct of domestic monetary and financial, as well as exchange-rate, policies.

Any country that has considered establishing an offshore center has had to weigh the potential disadvantages against the likely benefits. The United States, in establishing an International Banking Facility (IBF) in 1980 to allow U.S. banks to compete with their counterparts in the offshore centers, imposed rules to ensure that the facilities did not interfere with the conduct of U.S. monetary policy. In particular, the U.S. required the IBF to lend only to *non-residents* and prohibited IBF checking accounts with non-bank depositors. Japan's authorities have been unwilling to establish an offshore facility in Tokyo despite widespread support from Japan's domestic and foreign banking communities for such facilities because they fear that it would disrupt their domestic monetary and financial objectives. The benefits and costs posed by the Asian dollar market to its host countries are therefore important to an understanding of that market's development.

#### Singapore's Experience

Singapore's experience with offshore facilities is likely to be more relevant for other countries than that of Hong Kong. The reason is that Hong Kong has no central bank and only a very limited degree of independence in its monetary policy. Hong Kong

also has no government debt to manage or exchange control to administer. The Colony's financial policies aim at supervising and regulating banks, and for this reason, offshore facilities do not pose as great a "threat" to its domestic monetary and exchange rate policies as they may pose elsewhere. In contrast, the MAS performs all the traditional functions of a central bank *except* issuing currency. Its functions and responsibilities include the supervision and regulation of banking and financial institutions, exchange control, and the supervision of the business of offshore banks.

The regulations Singapore applies to offshore banks are designed, in part, to be consistent with the government's other financial policy objectives, which include the protection of the local banking industry, control over the exchange rate, and monetary control. Before embarking on their Asian dollar business, for example, banks in Singapore must seek a license from the MAS. Furthermore, in carrying out their offshore activities, the licensed banks must set up their own separate accounting departments—the Asian Currency Units. Each ACU receives individual management guidelines that govern even the sources and uses of its funds.

The MAS provides four types of banking licenses: (1) a complete banking license, (2) a restricted license, (3) a license for offshore operations, and (4) a license to carry out merchant banking operations. The four licenses correspond to full, restricted, offshore and merchant banks, respectively. As the name implies, full commercial banks provide a complete range of commercial banking services. Restricted banks, unlike full banks, cannot accept deposits of less than 250,000 Singapore dollars (about \$20,000 U.S. dollars) and offer savings accounts. Thus, restricted banks provide wholesale rather than retail banking services. Offshore banks are not allowed to accept deposits in Singapore dollars but can make loans in Singapore dollars and foreign currency to domestic residents and non-residents. Their activities are mainly confined to wholesale banking. Finally, the merchant banks offer the traditional range of services in

underwriting stocks and bonds, investment counselling, and (increasingly) the packaging of loans to the Far East.

The licensing procedure is intended to prevent an influx of foreign banks operating in the domestic money market from jeopardizing the local banking industry. A series of fiscal incentives provide further protection. Loans by offshore banks to domestic residents are subject to a corporate tax rate of 40 percent, while loans to non-residents are subject to a concessionary rate of only 10 percent. Moreover, an offshore bank's total lending to non-residents is generally limited to 30 million Singapore dollars. The concessionary rate of 10 percent along with the absence of reserve requirements on ACU deposits were aimed at putting Singapore on a competitive footing with other offshore centers.

On the ACU part of their business, domestic banks are subject to the same treatment as foreign banks, but reserve requirements are imposed on their Singapore dollar deposits. These requirements consist of: (1) a six percent non-interest-bearing cash reserve to be held with the Monetary Authority of Singapore; (2) a ten percent primary liquid asset requirement—notes and coin, excess cash reserves held with the MAS, call loans, and short-term treasury securities; and (3) a ten percent second tier of liquid assets including excess items under (2), commercial bills, and longer-term government securities.

Because Singapore allows domestic residents to hold foreign currency deposits, it has had to maintain the 40 percent withholding tax on domestic non-bank residents' interest from foreign currency deposits in ACU's, even though *foreign-owned* deposits are exempt from tax. The uniform rate of taxation on domestic-owned deposits is necessary to pre-empt extra incentives for domestic residents to switch from domestic currency deposits to foreign currency deposits. Non-bank foreigners are discouraged from holding interest-bearing deposits in local currency (Singapore dollars) because they would be liable for the 40 percent withholding levy. The tax structure, therefore, gives foreigners strong incentives to deal with ACU's only in foreign monies, but gives domestic residents no comparable incentives to move out of Singapore dollars.

Nevertheless, the tax structure does not remove all incentives for residents to switch to foreign cur-

rency deposits. While no *tax* advantage accrues to domestic residents holding foreign currency deposits, there are incentives for the banks to encourage domestic residents to switch from a Singapore dollar deposit to an ADM deposit. Chief among the incentives is the reserve requirement demanded for Singapore dollar deposits but not for U.S. dollar (or other foreign currency) deposits. The requirement amounts to a tax on banks' local currency liabilities because the reserves are non-interest earning assets. To avoid the reserve requirements on Singapore dollar deposits, the banks can offer residents an ADM deposit rather than a Singapore dollar deposit.<sup>6</sup> In fact, the reduction in the effective cost of deposits is such that the banks can offer a slightly more attractive yield on the ADM deposits and thereby encourage domestic residents to make the switch.

Clearly, such shifts could have a debilitating effect on domestic monetary control. The exchange of domestic currency deposits for ADM accounts would reduce the domestic banks' Singapore dollar deposit liabilities and lower the broadly-defined domestic money stock (since ADM accounts are time deposits, they would most likely substitute for similar domestic deposits). To avoid this problem, the Monetary Authority of Singapore faced several possible options in the early 1970s<sup>7</sup>: (1) rely on moral suasion to discourage domestic banks from conducting such operations, (2) pay a competitive interest rate on required reserves, thereby removing the incentive, (3) impose direct penalties on such shifts, (4) subject Asian dollar market deposits to reserve requirements, or (5) eliminate domestic reserve requirements. Of these options, Singapore authorities have come to rely on moral suasion. Imposing reserve requirements on ADM deposits would have removed banks' incentives to offer more attractive rates on their ADM currency deposits, but the ultimate effect would have been to reduce their ability to offer interest rates competitive with those offered in other offshore markets. That option would simply have shifted ADM transactions to some other center. Eliminating domestic reserve requirements would have made domestic monetary control much more difficult, while paying interest on reserves could involve considerable cost. The option of imposing penalties was deemed infeasible.

Still, while moral suasion may have been the most feasible alternative, it is unlikely to be very effective when incentives for shifts from the offshore to the onshore market are strong. A classic illustration of this difficulty in separating offshore from domestic transactions occurred in 1972-1973 when there were heavy inflows of speculative capital:

“Because domestic interest rates were higher than those in the Eurocurrency market, they swapped foreign currency for local currency through the medium of local banks—a practice allowed under the terms and conditions of ACU operations—and re-lent such funds to local residents at a higher rate for speculative investment. Between January 1972 and March 1973, ACU interbank deposits with Singapore banks increased by an incredible 259 percent. The upshot was excess liquidity at home which threatened Singapore’s exports.”<sup>8</sup>

Hong Kong too experienced a similar destabilizing effect during the 1972-74 period. These experiences demonstrate that the measures necessary to make an offshore center competitive may at times interfere with other policy objectives. Nonetheless, the benefits of an offshore center may well be great enough to justify incurring the costs.

### **Benefits**

The most immediately discernible benefit of the Asian dollar market for Singapore lies in the valuable financial services it has provided, services that have improved the country’s balance of payments. The Singapore economy has shown a consistent balance of trade deficit and the gap between imports and exports has widened in recent years because of the run-up in oil prices. This shortfall in trade has been met through large surpluses on services and net inflows on capital account. Although Singapore’s balance of payments data is too incomplete to estimate the contribution of financial services to offsetting the trade deficit, the overall contribution

of the service sector has been substantial. In 1981, the balance of trade deficit amounted to \$6.3 billion, of which 60 percent was offset by the net surplus on the service account.

In addition to helping finance the trade deficit, the Asian dollar market has contributed heavily to the growth of Singapore’s economy. The growth rates of the financial service sector have been robust compared to other components of GNP. Prior to the inception of the Asian dollar market in 1968, the share of GNP that consisted of financial and business services amounted to 8 percent, but in 1980 this ratio stood at more than 18 percent. The growth of the financial service sector was substantially higher than the growth of GNP, which averaged an annual rate of 8 percent over the same period.

Finally, the existence of an offshore center transmits to the populace of the host country valuable skills in the fields of banking and finance. Between 1970 and 1979, employment in the financial service sector in Singapore has grown much more rapidly than employment in either the manufacturing sector or the total economy. By the same token, the proportion of skilled workers employed in the financial sector is nearly twice that for the economy as a whole (skilled workers are defined here to include professional, technical, administrative and managerial workers). Thus, the establishment of an offshore market has not only soaked up an excess supply of labor but has added to the human capital of Singapore.

Furthermore, the presence of foreign banks and their accompanying staff has probably stimulated the development of a string of complementary service activities. Chief among these would be services associated with tourism. These services add further to the number of employed and the skill level of the population. Finally, the presence of an international financial market has probably made Singapore more attractive to regional corporations and multinational firms as a location for their operations in the Far East.

## **IV. Conclusion**

The need for an Asian dollar market was apparent long before its inception in 1968. Countries in the region were turning to the major western dollar centers, primarily New York and London, until

Singapore used a series of tax concessions and changes in banking regulation to encourage the development of an Asian offshore center. Beginning in 1968, direct stimuli such as exemptions



from interest withholding tax, lower taxes on bank profits from Asian dollar offshore loans, and the lifting of all exchange controls spurred the market to its phenomenal growth. The market began as a conduit for funds from Asia to the European markets, but has quickly become a mature offshore banking center.

The creation of the Asian dollar market has cost Singapore some loss of domestic monetary control but the benefits to the country seem to support its initial decision. The boom in financial services has improved the country's balance of payments and imparted additional jobs and skills in banking and finance to its population.

The Asian dollar market is likely to undergo many more changes in the years ahead. At present, Singapore is still mainly a fund collection center, although its government is hoping to make inroads into Hong Kong's share of the loan syndication

business. This ambition was succinctly expressed by Singapore's Trade and Finance Minister, Koh Chok Tong, in his budget speech of 1980: "In the 1980s, we shall develop Singapore into a financial supermarket offering a wide and sophisticated range of financial services."

What is certain about the future of the Asian dollar market is that other Asian countries will pose stiffer competition in the years ahead. Hong Kong, for example, is trying to increase its fund collection activities, while Japan is contemplating the establishment of an international banking facility on its shores. The market will also be affected by recent financial developments within the international banking community. In particular, how that community resolves the problems of lending to developing countries will be key to the further development of the Asian dollar market.

#### FOOTNOTES

1. In actuality, these markets involve trading in a wide spectrum of currencies, but because of the dominance of the dollar—90 percent of transactions in the Asian dollar markets and 75 percent in the Euro-currency markets—the terms Asian dollar and Euro-dollar are generally used interchangeably with Asian currency and Euro-currency.

2. See the *Annual Report of the Monetary Authority of Singapore* for 1973.

3. See McKinnon, 1979.

4. See the *Far Eastern Economic Review*, July 24, 1981.

5. Certain aspects of Singapore's tax structure are less favorable compared to Hong Kong, though. For example, foreign residents of Singapore pay a 40 percent maximum tax on their income, while Hong Kong levies a graduated tax

with a maximum of 25 percent. The overall corporate tax rate in Singapore is also higher—40 percent compared to 16.5 percent in Hong Kong—but ACU's interest in their earnings from loans to *non-residents* enjoys the more advantageous tax rate of 10 percent.

6. Admittedly, banks thereby expose themselves to foreign exchange risk since they have a future liability in U.S. dollars and spot assets in Singapore dollars. However this risk can be hedged by a "swap" of Singapore for U.S. dollars, that is, by selling Singapore dollars in the spot exchange market and purchasing them in the forward market.

7. See Hewson, 1979.

8. See the *Annual Report of the MAS* for 1979.

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